



Fact Sheet

Date: May 7, 1999

NPDES Permit Number: AK-002618-2

The U.S. Environmental Protection Agency (EPA) Plans To Reissue A Wastewater Discharge Permit To:

**Royal Aleutian Seafoods Corporation
701 Dexter Avenue North, Suite 403
Seattle, WA 98109**

EPA Proposes NPDES Permit Reissuance.

EPA proposes to reissue a *National Pollutant Discharge Elimination System* (NPDES) permit to Royal Aleutian Seafoods, Inc. The proposed permit sets conditions on the *discharge of pollutants* from the Royal Aleutian Seafoods plant- Unalaska seafood to Unalaska Bay, Alaska. In order to ensure protection of water quality and human health, the permit places limits on the types and amounts of pollutants that can be discharged and places other conditions on the facility.

This Fact Sheet includes:

- the tentative determination of EPA to issue the permit,
- information on public comment, public hearing, and appeal procedures,
- a description of the *facility* and proposed discharge,
- a map and description of the discharge location,
- a listing of past and proposed effluent limitations, schedules of compliance, and other conditions, and
- technical material supporting the conditions in the permit.

EPA Invites Comments on the Proposed Permit.

EPA will consider all substantive comments before reissuing the final NPDES permit. Those wishing to comment on the proposed permit may do so in writing by the expiration date of the Public Notice. After the Public Notice expires and the public comments have been considered, EPA Region 10's Office of Water Director will make a final decision regarding permit reissuance.

If no substantive comments are received, the tentative conditions in the proposed permit will become final and the permit will become effective upon issuance. If comments are received, EPA will respond to the comments and the permit will become effective 30 days after its issuance date, unless a request for an evidentiary hearing is submitted within 30 days.

Documents Are Available for Review.

The proposed NPDES permit and related documents can be reviewed at EPA's Regional Office in Seattle between 9:00 a.m. and 4:00 p.m., Monday through Friday. To request copies and other information, contact the NPDES Permits Unit at:

United States Environmental Protection Agency, Region 10
1200 Sixth Avenue, OW-130
Seattle, Washington 98101
(206) 553-1214 or
1-800-424-4372 (from Alaska, Idaho, Oregon and Washington)

The fact sheet and proposed permit are also available at:

Alaska Department of Environmental Conservation
555 Cordova Street
Anchorage, Alaska 99501
(907) 269-7500
Attention: Water Permits.

TABLE OF CONTENTS

	<u>page</u>
1 APPLICANT	5
2 TYPE OF FACILITY AND ACTIVITY	5
2.1 Facility Location and Description	5
2.2 Process Description	5
2.3 Facility History and Performance	5
3 PROPOSED DISCHARGE	6
3.1 Nature, Amount, and Composition of Discharge	6
3.2 Treatment of Wastewater Prior to Discharge	6
4 RECEIVING WATER	6
4.1 Nature of Unalaska Bay	6
4.2 Beneficial Uses of Unalaska Bay	6
4.3 Issues of Site-specific Interest	7
5 BASIS FOR EFFLUENT LIMITATIONS AND MONITORING	7
5.1 General Approach	7
5.2 Summary of Effluent Limitations, Past and Proposed	8
5.3 Technology-based Evaluation	8
5.4 Mixing Zone and Other Variances to State Water Quality Standards	9
5.5 Water Quality-based Evaluation	9
5.6 Summary of Effluent Monitoring	10
6 BASIS FOR BEST MANAGEMENT PRACTICES PLAN	11
7 BASIS FOR ENVIRONMENTAL MONITORING	12
8 BASIS FOR ANNUAL REPORT	12
9 PERMIT CONDITIONS FOR COMPLIANCE, RECORDING, REPORTING, AND OTHER GENERAL PROVISIONS	13
10 OTHER LEGAL REQUIREMENTS	14
10.1 State Water Quality Standards and Certification	14
10.2 Endangered Species Act	14
10.3 Fishery Conservation and Management Act	14
10.4 Coastal Zone Management Act	15
10.5 Pollution Prevention Act	15
10.6 Oil Spill Requirements	15

11	MODIFICATION OF PERMIT LIMITS OR OTHER CONDITIONS	15
12	PERMIT EXPIRATION	16
13	GLOSSARY OF TERMS AND ACRONYMS	16
14	REFERENCES	20
APPENDIX A - Location of the Royal Aleutian Seafoods plant- Unalaska		22
APPENDIX B - Diagram of the Royal Aleutian Seafoods plant- Unalaska		23
APPENDIX C - Report of Modeling the Discharge of Settleable Solid Seafood Residues		24

1 APPLICANT

Royal Aleutian Seafoods Corporation
701 Dexter Avenue North, Suite 403
Seattle, WA 98109

2 TYPE OF FACILITY AND ACTIVITY

2.1 Facility Location and Description

Royal Aleutian Seafoods owns, operates, and maintains the Royal Aleutian Seafoods plant- Unalaska, a facility which processes shellfish and limited amounts of finfish. Royal Aleutian Seafoods- Unalaska is located in the City of Unalaska, Alaska. The facility lies at 53°53'00" north, 166°32'00" west on Amaknak Island within Unalaska Bay, USGS hydrologic unit number 19030102. The map in Appendix A shows the location of Royal Aleutian Seafoods plant- Unalaska. The diagram of the grounds of the facility in Appendix B shows the lay of the building, docks and outfall lines. The facility consists of (1) a moored floating facility which houses crab processing lines, (2) one dock, and (3) assorted onshore residential and support buildings.

2.2 Process Description

Royal Aleutian Seafoods plant- Unalaska processes crab and a limited quantity of snails, herring, black cod, and groundfish. Royal Aleutian takes receipt of the seafood catch from fishermen alongside its permanently moored floating facility. Seafood is butchered by hand and gilled by machine. The butchering wastewater is passed through a 3/8 inch chop-and-grind solids treatment system prior to discharge.

2.3 Facility History and Performance

Royal Aleutian Seafoods has owned and operated its Unalaska processing plant since 1988. The company is wholly American-owned and this is its only processing plant. The facility's major seafood product is cooked tanner and king crab sections; it has processed from 12 to 22 million pounds of live crab per year during the last five years. Since approximately 60% of these crabs is finished product and 40% is waste residues, the facility has discharged from five to nine millions pounds of crab waste solids per year during the last five years. Royal Aleutian Seafoods has conducted dive surveys since 1992 to monitor the size of the of crab-shell waste pile around its wastewater outfall and reported a persistent deposit of 1.3 acres. The permittee reported that the area of the waste pile which is thicker than 0.3 ft is about one acre and that the total observable area is about 1.3 acres (Enviro-Tech Diving 1998). Royal Aleutian Seafoods has applied and received permission from ADEC to reduce the size of the waste deposit through dredging. The facility's outfall pipe has broken on at least one occasion, and waste solids have been washed up on the shore. The permittee has been responsive in repairing its discharge

line and cleaning up crab wastes. The permittee replace its outfall line in the summer of 1998.

3 PROPOSED DISCHARGE

3.1 Nature, Amount, and Composition of Discharge

Royal Aleutian Seafood's plant- Unalaska discharges seafood processing wastewater consisting of biochemical oxygen demand (BOD5), total suspended solids (TSS), settleable solid processing residues, floating residues, and scum. The effluent discharge may also contain trace amounts of disinfectants.

3.2 Treatment of Wastewater Prior to Discharge

Royal Aleutian Seafoods plant- Unalaska has upgraded its effluent treatment from the technology-based standard for remote locations in Alaska of grinding waste solid residuals to one half inch prior to discharge to a more stringent grinding waste solid residuals to three eighths inch prior to discharge. The grinding of offal to smaller size is believed to facilitate the reduction in the size of the waste pile through decomposition and dispersal; it may, however, create a waste pile of small volume with a larger areal footprint.

4 RECEIVING WATER

4.1 Nature of Unalaska Bay

Unalaska Bay is located in the Aleutians West Borough on Unalaska Island. Greater Unalaska Bay is 10.4 nautical miles wide at its mouth from Cape Cheerful on the west to Cape Kalekta on the east and roughly 11.6 nautical miles from the mouth of the bay to its head at the south end of Captains Bay. Greater Unalaska Bay is approximately 87 square nautical miles in area and has roughly 50 nautical miles of shoreline.

The Royal Aleutian Seafoods plant discharges into South Unalaska Bay along the northwest side of Amaknak Island. South Unalaska Bay has weak to moderate currents which are primarily wind-driven.

The watershed includes the City of Unalaska, Dutch Harbor (one of the busiest ports in Alaska), three of Alaska's largest onshore seafood processing facilities in addition to the Royal Aleutian Seafoods processing facility, a major airport, a significant upland site of oil seepage, and numerous tributary streams.

4.2 Beneficial Uses of Unalaska Bay

Designated beneficial uses for Alaska's marine waters are established by regulation and are found in the State of Alaska Water Quality Standards [18 AAC 70]. For marine waters

of the State, these designated uses include: (1) water supply, (2) water recreation, (3) growth and propagation of fish, shellfish, other aquatic life, and wildlife, and (4) harvesting for consumption of raw mollusks or other raw aquatic life [18 AAC 70.020(a)(2)].

4.3 Issues of Site-specific Interest

The Royal Aleutian Seafoods plant- Unalaska's NPDES permit expired Oct. 30, 1996. Prior to the expiration of the permit, Alaska Department of Environmental Conservation (ADEC) listed south Unalaska Bay as water quality limited for its low dissolved oxygen (DO) concentrations and large waste piles of settleable solid seafood processing residues. EPA evaluated the total maximum daily loads (TMDL) of biochemical oxygen demand (BOD) and settleable solid residues and determined that Royal Aleutian Seafoods was a relatively small source of the BOD which was consuming DO in the water column and a moderate source of settleable solids. Royal Aleutian Seafoods applied to and received authorization from ADEC to discharge an accumulation of settleable solid seafood processing residues within a one acre zone of deposit (ZOD) around its outfall terminus. On April 29, 1996, EPA issued an NPDES permit to Royal Aleutian Seafoods, incorporating the TMDLs and the one acre ZOD.

Alyeska Seafoods and UniSea appealed this permit on May 23, 1996, challenging the provisions which address the discharge of settleable solid seafood processing residues. Alyeska Seafoods and UniSea withdrew their request for an evidentiary hearing of this permit on October 30, 1997.

EPA is revoking and reissuing the 1996 permit on the basis of noncompliance by the permittee with the limitation of 456,000 lbs/year on the discharge of settleable solid seafood processing residues [40 CFR § 122.64(a)(1)]. Royal Aleutian Seafoods challenged the validity of the modeling assessment of settleable solid residues, pointing out that its historic waste pile was slightly more than the authorized one acre ZOD in spite of years of discharging millions of pounds of seafood processing wastes (exceeding the theoretical limit of 456,000 lbs/year). EPA asked its contractor to review the model in light of the discharges and waste pile size. Tetra Tech provided a revised report with new theoretical limits of steady-state discharge amounts which would produce depositional areas of zero, one and two acres (Tetra Tech, September 30, 1996; Appendix C). EPA is using the revised modeling results in its determination of limits on discharges of settleable solid seafood processing residues. EPA has exercised compliance discretion on the exceedance of the limit on settleable solids due to the merits of the permittee's data and argument; the revised modeling verified the permittee's position.

5 BASIS FOR EFFLUENT LIMITATIONS AND MONITORING

5.1 General Approach

EPA followed the Clean Water Act, state regulations, and EPA's 1991 *Technical Support Document for Water Quality-Based Toxics Control* (TSD) to develop the proposed effluent limits.

In general, the Clean Water Act requires that the effluent limit for a particular pollutant be the more stringent of either the *technology-based limit* or the *water quality-based limit*. This proposed permit includes both technology-based and water quality-based limits. Technology-based limits are established based upon the level of treatment that is achievable using available technology. Water quality-based limits are designed to prevent exceedance of the Alaska Water Quality Standards (AWQS) in Unalaska Bay. Appendix C contains more detail about how EPA established these water quality-based limits on settleable solid seafood residues.

5.2 Summary of Effluent Limitations, Past and Proposed

Table I: Comparison of Permit Limits				
Parameter	Past Average	Past Maximum	Proposed Average	Proposed Maximum
Settleable Solids, particle size	no limit	0.5 inch	no limit	0.5 inch
Settleable Solids, annual load zero acre zone of deposit @ 1/2 in zero acre zone of deposit @ 3/8 in one acre zone of deposit @ 1/2 in one acre zone of deposit @ 3/8 in two acre zone of deposit @ 1/2 in two acre zone of deposit @ 3/8 in	no limit	no limit	no limit	180,000 lbs/yr 135,000 lbs/yr 10,800,000 lbs/yr 5,400,000 lbs/yr 36,000,000 lbs/yr 25,200,000 lbs/yr
pH, standard units	no limit	no limit	no limit	from 6.5 to 8.5

The proposed permit also prohibits discharges of waste streams that are not part of the normal operation of the facility as reported in the permit application.

5.3 Technology-based Evaluation

Section 301 of the Clean Water Act requires particular categories of industrial dischargers to meet technology-based effluent limitation guidelines. The intent of a technology-based effluent limitation is to require a minimum level of treatment for industrial and municipal *point sources* across the country based on currently available treatment technologies

while allowing a discharger to choose and use any available pollution control technique to meet the limitations. Where EPA has not yet developed guidelines for a particular industry, EPA can establish permit limitations using Best Professional Judgment (BPJ; 40 CFR §§ 122.43, 122.44 and 125.3).

EPA has determined that discharges of seafood processing wastes shall not exceed one half inch in any dimension (see 40 CFR § 408) when processed and discharged in remote Alaskan locations. While the industry has found that it is possible to process large volumes of fish offal into fish and bone meal as a marketable secondary product, it has found that crab wastes alone do not offer such opportunities.

5.4 Mixing Zone and Other Variances to State Water Quality Standards

The State of Alaska, through ADEC, can authorize a number of site-specific variances to the Alaska Water Quality Standards. *Variances* to AWQS include site-specific water quality criteria (18 AAC §§ 70.220 and 70.235), a *mixing zone* wherein AWQS may be exceeded (18 AAC § 70.240), a *zone of deposit* wherein the AWQS criteria for settleable residues may be exceeded (18 AAC § 70.210), and short-term variances from the anti-degradation policy standard or the water quality criteria (18 AAC § 70.200). In addition, ADEC may exercise enforcement discretion in determining whether to initiate an enforcement action on a water quality violation (18 AAC § 70.900).

In the case of this permit, Royal Aleutian Seafoods plant- Unalaska will apply for (1) a mixing zone of 25 ft radius for pH, (2) a mixing zone of 100 ft radius for color, turbidity, and floating and suspended residues around the processing wastewater discharge of outfall 001, and (3) a one acre zone of deposit on the sea floor around outfall 001 for settleable solids seafood processing residues. ADEC has indicated that it will approve these variances in its State certification of the NPDES permit.

5.5 Water Quality-based Evaluation

Water quality-based limits are derived from the Alaska Water Quality Standards to protect the water quality and beneficial uses of Alaskan waters. The NPDES regulation at 40 CFR § 122.44(d)(1) requires that permits include limits for all pollutants or parameters which “are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any state water quality standard, including state narrative criteria for water quality.” The limits must be stringent enough to ensure that state water quality standards are met, and must be consistent with any available wasteload allocation established in the assessment of a total maximum daily load of pollutant discharges to a receiving water. Based upon the Royal Aleutian Seafoods’ monitoring of its effluents and its receiving waters, water quality-based limits are justified for three pollutants: settleable solid seafood processing residues, floating residues, and pH (a measure of the acidity or alkalinity of the wastewaters).

Royal Aleutian Seafoods has requested that the permit limits for settleable solid residues provide for a discharge of ground seafood wastes. EPA has completed an assessment of allowable discharges of wastes ground to 1/2 inch and to 3/8 inch for a zero acre, one acre and two acre zone of deposit (Appendix C). ADEC has previously approved a one acre ZOD.

The most stringent State criteria for pH are those for the growth and propagation of fish, shellfish, and other aquatic life: pH may not be less than 6.5 or greater than 8.5, and may not vary more than 0.1 pH unit from natural conditions in the receiving water. The criteria for maximum and minimum pH are used as end-of-pipe water quality-based limits in the permit. It is EPA's best professional judgment that the criterium of no variation of more than 0.1 pH unit from natural conditions of Alaska's coastal marine waters will be met outside of a 25 ft radius zone of initial dilution and no exceedance of the standard will occur outside of the 100 ft mixing zone.

Additionally, the permit prohibits the discharge of floating residues which violate the Alaska water quality standard: "May not... cause a film, sheen, or discoloration... or a sludge, solid, or emulsion... on the surface of the water." Standards exist for color and turbidity. It is EPA's best professional judgment that the criterium of no exceedance of these standards will occur outside of the 100 ft mixing zone.

Antidegradation of Water Quality. In proposing to reissue this permit, EPA has considered the State's antidegradation policy [18 AAC 70.015]. This policy states, in part, that in Alaska: "the existing water uses and the level of water quality necessary to protect the existing uses must be maintained and protected (and), if the quality of a water exceeds levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, that quality must be maintained and protected unless the department (ADEC)... allows the reduction in water quality...". The permit, as stated above, allows and limits effluent discharges of residues and pH. The limits in the draft permit are consistent with and protective of the State water quality standards and the water quality of the receiving water. EPA believes that the draft permit is consistent with the State's antidegradation policy.

5.6 Summary of Effluent Monitoring

The Clean Water Act requires that monitoring shall be included in permits to determine compliance with effluent limitations. Monitoring may also be required to gather data for future effluent limitations or to monitor effluent impacts on the receiving water. The Permittee will be responsible for conducting the monitoring and for reporting the results to EPA. Table II presents the proposed monitoring requirements based on the minimum sampling necessary to adequately monitor the facility's performance. For comparison purposes, the table also shows the monitoring requirements in the past permit.

TABLE II. Comparison of Monitoring Requirements		
Parameter	Past Frequency and Sample Type	Proposed Frequency and Sample Type
Flow, mgd	daily, continuous	daily, continuous
Biochemical Oxygen Demand, BOD ₅	once per month, three months per yr; 24-hr composite	no monitoring
Oil and Grease, O&G concentration (mg/L) and mass load (lbs/day)	once per month; grab	no monitoring
Total Suspended Solids, TSS concentration (mg/L) and mass load (lbs/day)	once per month, three months per yr; 24-hr composite	once per month, three months per yr; 24-hr composite
Settleable Solids concentration (mg/L) and mass load (lbs/day)	once per week, three months per yr; grab or 24-hr composite	once per week, three months per yr; 24-hr composite
Floating Residues, presence/absence	once per day, three months per yr; visual	once per day, three months per yr; visual
pH	once per month, three months per yr; 24-hr composite	once per month, three months per yr; grab or meter
Temperature	no monitoring	once per month, three months per yr; meter

The permit requires effluent monitoring of pollutant parameters for which a limit or condition exists within the permit and for parameters on which data is necessary to verify that no permit limits are required in this or future permits (40 CFR §§ 122.41 and 122.44). Monitoring is conducted during three of the twelve months per year as sufficient to collect representative samples which quantify both concentrations and mass loading for the facility. The sampling months will coincide with the snow crab season and its attendant high levels of pollutant discharge.

Representative Sampling. The proposed permit requires sampling whenever a bypass, spill, or non-routine discharge of pollutants occurs, if such a discharge could cause a violation of an effluent limit.

6 BASIS FOR BEST MANAGEMENT PRACTICES PLAN

The Clean Water Act and federal regulations authorize EPA to require *best management practices*, or BMPs, in NPDES permits. BMPs are measures for controlling the generation

of pollutants and their release to waterways. For many facilities, these measures are typically included in the facility Operation & Maintenance plans (O&M) plans. BMPs are important tools for waste minimization and pollution prevention. EPA encourages facilities to incorporate BMPs into their O&M plans and to revise them as new practices are developed.

The proposed permit requires Royal Aleutian Seafoods to develop and implement a BMP plan within 180 days of permit issuance. The Permittee must develop a materials balance assessment (i.e., a flow diagram) of its process, treatment and discharge lines and quantify the input and output streams of water and pollutants. The Permittee must consider the optimization of product recovery and chemical use, staff training aimed at controlling the discharge of pollutants to Unalaska Bay, spill prevention and control, and water conservation. The Permittee must document this assessment as a working document known as a BMP plan in accordance with the requirements of the permit.

7 BASIS FOR ENVIRONMENTAL MONITORING

The proposed permit requires Royal Aleutian Seafoods to monitor the receiving water for the discharge and accumulation of residues on the sea floor on an annual basis. The purpose of this monitoring is to verify the assumptions made in developing permit limits regarding receiving water conditions and the effectiveness of permit limits. Based on the results of this study, EPA will determine whether or not to revise these permit limits when the permit is renewed.

The proposed permit requires the Permittee to submit study plans to EPA for approval. The plan must address issues such as appropriate sampling location, variability in the receiving water, appropriate sampling and analytical methods, analytical variability, and quality assurance/quality control for sampling and analysis.

8 BASIS FOR ANNUAL REPORT

The proposed permit requires the Permittee to complete and submit an annual report which compiles effluent and environmental monitoring data and reports permit violations, upset conditions, by-pass conditions, plant or process changes, and corrective actions undertaken to improve wastewater treatment and pollution prevention at the facility. The annual report provides a comprehensive record of wastewater discharge at the facility and its effect on the receiving water and supports improved understanding and management of the discharges and discussion of these discharges by the Permittee and government representatives. Title 40 of the Code of Federal Regulations provides the regulatory basis for this requirement at sections 122.41 ("Conditions applicable to all permits"), 122.44(i) ("Monitoring requirements"), and 122.48 ("Requirements for recording and reporting of monitoring results").

9 PERMIT CONDITIONS FOR COMPLIANCE, RECORDING, REPORTING, AND OTHER GENERAL PROVISIONS

Sections § VI through VIII of the draft permit contain standard regulatory language that is required to be in all NPDES permits. The following sections of the permit are based largely upon 40 CFR Part 122, subpart C, "Permit Conditions" and on other referenced laws and regulations.

- Duty to Comply from 40 CFR § 122.41(a),
- Proper Operation and Maintenance from 40 CFR § 122.41(e),
- Duty to Mitigate from 40 CFR § 122.41(d),
- Toxic Pollutants from 40 CFR § 122.41(a)(1-2), § 122.44(b, e), and § 125.3,
- Removed Substances from 40 CFR § 122.41(a)(1) and (o) and CWA § 405(A),
- Need to Halt or Reduce Activity not a Defense from 40 CFR § 122.41(c),
- *Bypass* of Wastewater Treatment from 40 CFR § 122.41(m),
- *Upset* Conditions from 40 CFR § 122.41(n),
- Inspection and Entry from 40 CFR § 122.41(i),
- Penalties for Violations of Permit Conditions from 40 CFR § 122.41(a)(2-3),
- Duty to Provide Information from 40 CFR § 122.41(h),
- Records Contents from 40 CFR § 122.41(j)(3),
- Submittal of Reports from 40 CFR § 122.41(h, j, and l),
- Retention of Records and Reports from 40 CFR § 122.41(j)(2),
- On-site Availability of Records and Reports from 40 CFR § 122.41(i)(2),
- Availability of Reports for Public Review from 40 CFR § 122.1(e) and § 122.7(1) and 40 CFR § 2.101,
- Planned Changes from 40 CFR § 122.41(l)(1),
- Changes in the Discharge of Toxic Substances from 40 CFR § 122.42(a),
- Anticipated Noncompliance from 40 CFR § 122.41(l)(2),
- Reporting of Noncompliance from 40 CFR § 122.41(l)(6-7) and § 122.44(g),
- Permit Actions from 40 CFR § 122.44(c) and 40 CFR § 122.61 - § 122.64,
- Duty to Reapply from 40 CFR § 122.41(b),
- Incorrect Information and Omissions from 40 CFR § 122.41(l)(8),
- Signatory Requirements from 40 CFR § 122.41(k),
- Property Rights from 40 CFR § 122.41(g),
- Severability from 40 CFR § 124.16,
- Transfers from 40 CFR § 122.41(l)(3),
- Oil and Hazardous Substance Liability from 40 CFR § 125.3, 40 CFR part 300, 33 CFR § 153.10(e), and section 311 of the Act,
- State Laws from 40 CFR § 122.1(f) and section 510 of the Act, and
- Reopening of the Permit from 40 CFR § 122.41(f) and § 122.44(c).

10 OTHER LEGAL REQUIREMENTS

10.1 State Water Quality Standards and Certification

EPA is requesting State officials to review and provide appropriate certification to this NPDES permit pursuant to 40 CFR § 124.53. Since State waters are involved in the draft permit, the provisions of Section 401 of the Clean Water Act apply, requiring EPA to seek State certification that the permit is protective of the State Water Quality Standards before issuing a final permit. This certification by the State ensures that federally issued permits are in compliance with the laws of the State (see 40 CFR § 124.55). In particular, ADEC must provide written stipulation for a water quality study of the receiving water and authorization of mixing zones and a zone of deposit in its certification of the permit. In accordance with 40 CFR §124.10(c)(1), public notice of the draft permit has been provided to the State agencies having jurisdiction over fish, shellfish and wildlife resources, and over coastal zone management plans.

10.2 Endangered Species Act

Pursuant to 40 CFR § 122.49(c), EPA has concluded that the localized effluent discharges authorized by this permit will have no effect on the continued existence of any endangered or threatened species and will not adversely affect their critical habitat. Endangered species found in the vicinity of the discharge include Eskimo curlew (*Numenius borealis*), American peregrine falcon (*Falco peregrinus anatum*), Aleutian shield-fern or Aleutian holly-fern (*Polystichum aleuticum*), short-tailed albatross (*Diomedea albatrus*), humpback whale (*Megaptera novaeangliae*), right whale (*Eubalaena glacialis*), and blue whale (*Balaenoptera musculus*). Threatened species found in the vicinity of the discharge include Spectacled eider (*Somateria fischeri*), Steller's eider (*Polysticta stelleri*), Aleutian Canada goose (*Branta canadensis leucopareia*), and Steller sea lion (*Eumetopias jubatus*).

The draft permit, fact sheet and consistency determination will be submitted to the U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) for review at the time of public notice. EPA is requesting concurrence from USFWS and NMFS on the draft permit, and will consider their comments in the final permit decision. EPA will initiate consultation should new information reveal impacts not previously considered, should the activities be modified in a manner beyond the scope of the original opinion, or should the activities affect a newly listed threatened or endangered species.

10.3 Fishery Conservation and Management Act

The Magnuson-Stevens Fishery Conservation and Management Act requires EPA to consult with NMFS with respect to the reissuance of this NPDES permit concerning its impacts on any essential fish habitat and to provide a description of the measures

proposed to avoid, mitigate, and offset the impact of this permitted discharge on such habitat. EPA finds that the permitted discharge will comply with Alaska Water Quality Standards outside of the authorized zones of variance, that decreases in marine life within these zones will be compensated by increases in the abundance of marine life in surrounding zones of organic enrichment, and that issuance of this permit is not likely to adversely affect any species in the vicinity of the discharge. EPA provides this fact sheet to describe the discharge, the draft permit, and the permit's limits, conditions, and measures of mitigation.

10.4 Coastal Zone Management Act

The Applicant has certified that the activities authorized by this draft permit are consistent with the Alaska Coastal Management Plan. The draft permit, fact sheet and consistency determination will be submitted to the State for review at the time of public notice. Pursuant to 40 CFR § 122.49(d), requirements for State coastal zone management review and approval must be satisfied before the permit may be issued.

10.5 Pollution Prevention Act

It is national policy that, whenever feasible, pollution should be prevented or reduced at the source, that pollution which cannot be prevented should be recycled in an environmentally safe manner, and that disposal or release into the environment should be employed only as a last resort and should be conducted in an environmentally safe manner. The Permittee will discharge at the facility in accordance with best management practices which will address the provisions of the Pollution Prevention Act.

10.6 Oil Spill Requirements

Section 311 of the Clean Water Act prohibits the discharge of oil and hazardous materials in harmful quantities. Discharges specifically controlled by the draft permit are excluded from the provisions of Section 311 because these discharges are limited to amounts and concentrations which are deemed to be protective of State water quality standards. However, this permit does not preclude the institution of legal action or relieve the Permittee from any responsibilities, liabilities, or penalties for other unauthorized discharges of toxic pollutants which are covered by Section 311 of the Act.

11 MODIFICATION OF PERMIT LIMITS OR OTHER CONDITIONS

When EPA receives information that demonstrates the existence of reasonable cause to modify the permit in accordance with 40 CFR § 122.62(a), EPA may modify the permit. "Reasonable cause" includes alterations or additions to the facility or activity, new federal regulations or standards, new state water quality standards, the completion or modification of total maximum daily loads or wasteload allocations for the receiving

water of the facility (also, see 40 CFR § 122.44(d)((1)(vii)(B)), failure of the permit to protect state water quality standards, a change in a permittee's qualification for net limits, any relevant compliance schedule, the need to incorporate or revise a pretreatment or land application plan, when pollutants which are not limited in the permit exceed the level which can be achieved by technology-based treatment, the correction of technical mistakes and legal misinterpretations of law made in determining permit conditions, and the receipt of new information relevant to the determination of permit conditions. Minor modifications to a permit may be made by EPA with the consent of a permittee in order to correct typographical errors, change an interim compliance schedule, allow for a change in ownership, change a construction schedule, or delete an outfall. Pursuant to 40 CFR § 122.63, such minor modifications may be made without public notice and review.

12 PERMIT EXPIRATION

This permit will expire five years from its effective date. In accordance with 40 CFR § 122.6(a), the conditions of an expired permit continue in force under 5 U.S.C. § 558(c) until the effective date of a new permit when a permittee submits an application for permit reissuance 180 days before the expiration of the permit. Permits which are continued because EPA has not reissued a new permit remain fully effective and enforceable.

13 GLOSSARY OF TERMS AND ACRONYMS

§ means section or subsection.

AAC means Alaska Administrative Code.

ADEC means Alaska Department of Environmental Conservation.

Average monthly discharge means the average of "daily discharges" over a monitoring month, calculated as the sum of all daily discharges measured during a monitoring month divided by the number of daily discharges measured during that month. It may also be referred to as the "monthly average discharge."

Best management practices ("BMPs") means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of "waters of the United States." BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or **waste** disposal, or drainage from raw material storage.

BOD5 means biochemical oxygen demand, five-day.

Bypass means the intentional diversion of waste streams from any portion of a treatment facility.

°C means degrees Celsius.

CFR means Code of Federal Regulations.

Cooling water means once-through non-contact cooling water.

CWA means the Clean Water Act, (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972) Public Law 92-500, as amended by Public Law 95-217, Public Law 95-576, Public Law 96-483 and Public Law 97-117, 33 U.S.C. 1251 et seq.

Daily discharge means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the "daily discharge" is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the "daily discharge" is calculated as the average measurement of the pollutant over the day.

Daily maximum discharge means the highest allowable "daily discharge" and is also referred to as the "maximum daily discharge."

Discharge of a pollutant means any addition of any "pollutant" or combination of pollutants to "waters of the United States" from any "point source" or any addition of any pollutant or combination of pollutants to the waters of the "contiguous zone" or the ocean from any point source other than a vessel or other floating craft which is being used as a means of transportation.

Discharge Monitoring Report ("DMR") means the EPA uniform national form, including any subsequent additions, revisions, or modifications for the reporting of self-monitoring results by permittees. DMRs must be used by "approved States" as well as by EPA.

DO means dissolved oxygen.

Effluent limitation means any restriction imposed by the Director on quantities, discharge rates, and concentrations of "pollutants" which are "discharged" from "point sources" into "waters of the United States," the waters of the "contiguous zone," or the ocean.

EPA means U.S. Environmental Protection Agency.

ESA means the Endangered Species Act.

$^{\circ}F$ means degrees Fahrenheit.

Facility or activity means any NPDES “point source” or any other facility or activity (including land or appurtenances thereto) that is subject to regulation under the NPDES program.

lb means pound.

Maximum means the highest measured discharge or pollutant in a waste stream during the time period of interest.

Maximum daily discharge limitation means the highest allowable “daily discharge.”

MGD means million gallons per day.

mg/L means milligrams per liter.

Mixing zone means the zone of dilution authorized by ADEC under 18 AAC 70.032 wherein pollutant concentrations may exceed the criteria of the Alaska Water Quality Standards for the proscribed pollutants.

MLLW means mean lower low water.

mg/L means milligrams per liter.

ml means milliliter.

NMFS means National Marine Fisheries Service.

National Pollutant Discharge Elimination System (“NPDES”) means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under sections 307, 402, 318, and 405 of CWA.

OW means EPA’s Office of Water.

P.L. means (U.S.) Public Law.

Point source means any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff.

Pollutant means dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt, and industrial, municipal, and agricultural waste discharged into water.

Process wastewater means any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product.

QAPP means quality assurance project plan.

Schedule of compliance means a schedule of remedial measures included in a "permit", including an enforceable sequence of interim requirements (for example, actions, operations, or milestone events) leading to compliance with the CWA and regulations.

sp. means species.

Sanitary wastes means human body waste discharged from toilets and urinals.

Seafood means the raw material, including freshwater and saltwater fish and shellfish, to be processed, in the form in which it is received at the processing plant.

Seafood process waste means the waste fluids, organs, flesh, bones, and chitinous shells produced in the conversion of aquatic animals and plants from a raw form to a marketable form.

Settleable solid process residues means process waste solids that gravimetrically settle out of the process wastewater and accumulate on the bottom of a wastewater discharge collection sump (which typically has a residence time of 15 minutes).

Severe property damage means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

Technology-based limit means a permit limit or condition based upon EPA's technology-based effluent limitation guidelines or EPA's best professional judgment.

TSS means total suspended solids.

USGS means U.S. Geologic Service.

USFWS means U.S. Fish and Wildlife Service.

Upset means an exceptional incident in which there is unintentional and temporary noncompliance with permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

Variance means any mechanism or provision under section 301 or 316 of CWA or under 40 CFR part 125, or in the applicable "effluent limitations guidelines" which allows modification to or waiver of the generally applicable effluent limitation requirements or time deadlines of CWA. This includes provisions which allow the establishment of alternative limitations based on fundamentally different factors or on sections 301(c), 301(g), 301(h), 301(i), or 316(a) of CWA.

Water depth means the depth of the water between the surface and the sea floor as measured at mean lower low water (0.0).

Water quality-based limit means a permit limit derived from a state water quality standard or an appropriate national water quality criteria.

Waters of the United States or waters of the U.S. means:

- (a) All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
- (b) All interstate waters, including interstate wetlands;
- (c) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce including any such waters:
 - (1) Which are or could be used by interstate or foreign travelers for recreational or other purposes;
 - (2) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
 - (3) Which are used or could be used for industrial purposes by industries in interstate commerce;
- (d) All impoundments of waters otherwise defined as waters of the United States under this definition;
- (e) Tributaries of waters identified in paragraphs (a) through (d) of this definition;
- (f) The territorial sea; and
- (g) Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) through (f) of this definition.

Zone of deposit (ZOD) means an area of the bottom in marine, coastal, or estuarine waters in which ADEC has authorized the deposit of residues in exceedence of the water quality criteria of 18 AAC 70.020(b) and the antidegradation requirement of 18 AAC 70.0101(c).

14 REFERENCES

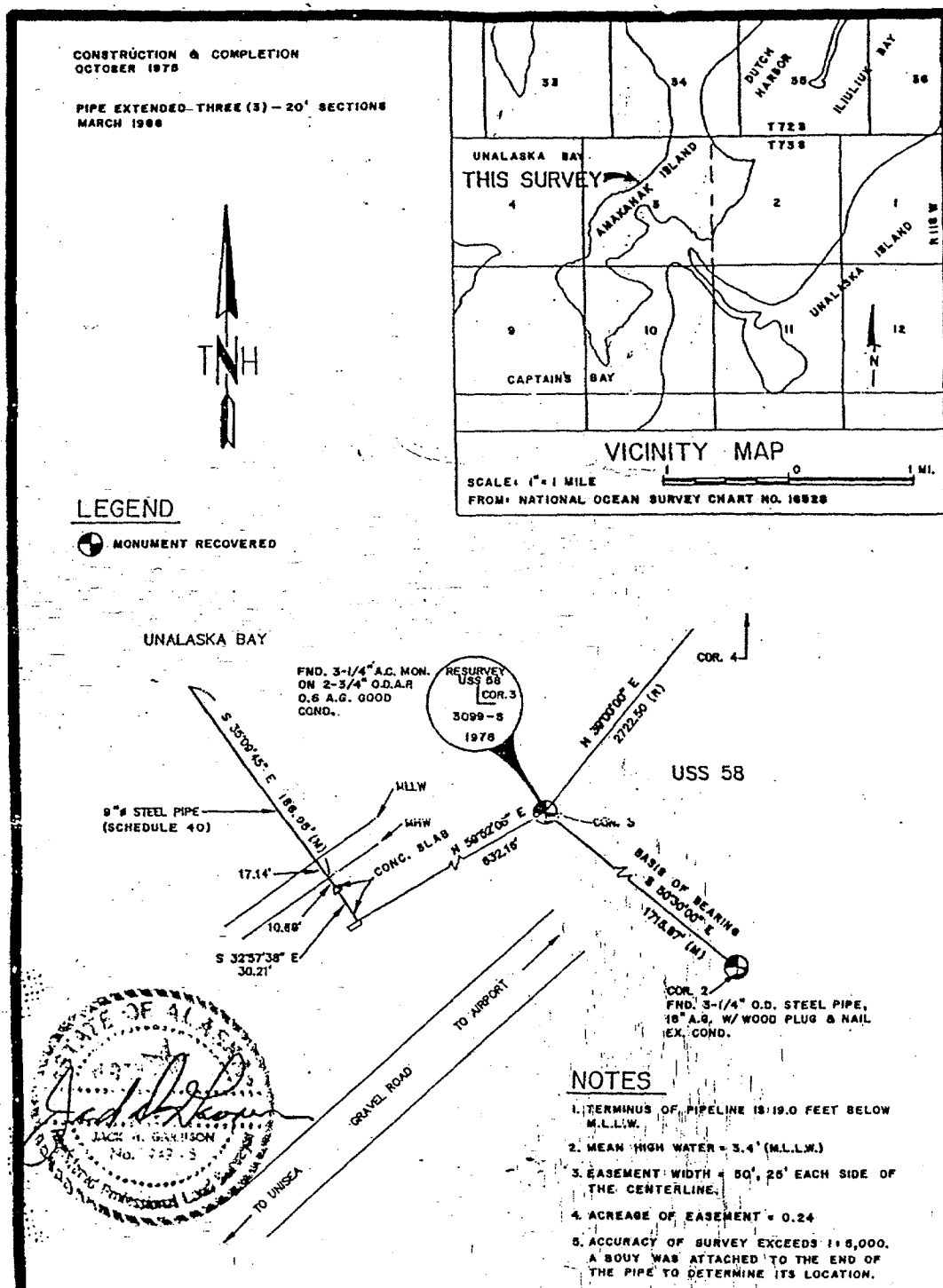
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APPENDIX A - Location of the Royal Aleutian Seafoods plant- Unalaska



Outfall Line Legend

- Above-Ground Portion
- Below-Ground Portion
- Under Water Portion

Map Labels:

- Shipping & Receiving Office
- Port Admin
- Docks
- RAS
- Ref. Van (6 Double-Stacked)
- Warehouses
- East Point Loop Rd
- Airport Beach Rd
- Unalaska Bay
- North

APPENDIX C - Report of Modeling the Discharge of Settleable Solid Seafood Residues

TECHNICAL BRIEF FOR EXPANDED SEAFOOD MODEL RUNS

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September 30, 1996.

In support of the development of a general NPDES permit for shore-based, near shore, and offshore seafood processors, Tetra Tech prepared an ocean discharge criteria evaluation (ODCE) report in July 1994. The report concentrated on characterizing the effluent being discharge from the covered facilities and its potential effect on receiving waters. The report also developed preliminary modeling predictions for the deposition of solid seafood waste residues on the sea floor.

Technical directive No. 12 directed Tetra Tech to expand the modeling assessment of the deposition of settleable solid seafood waste residues from processors using different particle size assumptions. Tetra Tech was also directed to determine endpoints for maximum discharges which produce deposition areas of zero, one, and two acres using the case scenarios defined in the previous ODCE.

To accomplish this task, three general cases were modeled (i.e., 0.5 inch, 0.38 inch, and 0.04 inch maximum particle size) and the results are presented in Tables 1, 2, and 3, respectively. No changes in the WASP5 model were required to perform these model simulations, however, the input files used for each model run were modified as needed and are described below. Results of the predicted areal coverage of solid wastes for both the WASP output, based on the number and area of grids, and SURFER, based on contours of depth accumulation, are reported. In general, the determination of the endpoints for maximum discharges that produce zero, one, and two acre waste piles are based on the areas estimated by SURFER, the 3-dimensional contouring software.

Table 1 depicts the area and thickness of a waste pile which results from discharging seafood waste solids that have been ground to a maximum particle size of 0.5 inch. The assessment assumes that 60% of the loading mass of particles is 0.5" in diameter, 20% is 0.25", and 20% is 0.125".

Table 2 depicts the area and thickness of a waste pile which results from discharging seafood waste solids that have been ground to a maximum particle size of 0.375 inch. The assessment assumes that 60% of the loading mass of particles is 0.375" in diameter, 20% is 0.188", and 20% is 0.094".

Table 3 depicts the area and thickness of a waste pile which results from discharging seafood waste solids that have been ground to a maximum particle size of 0.04 inch (= 1 mm). The assessment assumes that 100% of the loading mass of particles is 0.04" in.

TABLE 1. SEAFOOD WASTE ACCUMULATION MODEL RESULTS
FOR MAXIMUM PARTICLE SIZE OF 1.27 CM (0.5 IN)

TABLE 1. SEAFOOD WASTE ACCUMULATION MODEL RESULTS FOR MAXIMUM PARTICLE SIZE OF 1.27 CM (0.5 IN)							
Case # ^a	Net-Drift Current Speed (cm/sec)	Water Depth (m)	Bottom Slope (%)	Waste Solids Discharge Rate (lb/yr wet weight)	Maximum Waste Accumulation Depth (cm)	Areal Coverage (acres)	
						S ^b	W ^c
Near-Bottom Shore-Based Discharges							
1	5.0	15.2	0.0	200,000	2.9	0.0	0.1
				16,000,000	230	1.0	0.8
				100,000,000	1,435	1.8	1.3
2	15.0	15.2	0.0	200,000	2.2	0.0	0.1
				12,000,000	133	1.2	1.0
				40,000,000	445	2.1	1.4
3	5.0	15.2	12.5	100,000	1.4	0.0	0.1
				20,000,000	230	1.0	0.8
				100,000,000	1,438	1.8	1.4
4	15.0	15.2	12.5	100,000	1.1	0.0	0.1
				16,000,000	179	1.3	1.1
				40,000,000	446.4	2.1	1.4
5	5.0	15.2	25.0	20,000,000	288	1.0	0.8
6	15.0	15.2	25.0	16,000,000	179	1.3	1.1
Near-Surface Floating Discharges in Open Ocean							
7	5.0	15.2	0.0	200,000	1.8	0.0	0.1
				8,000,000	63.4	1.0	0.8
				20,000,000	176.2	2.0	1.4
8	15.0	15.2	0.0	300,000	1.4	0.0	0.2
				4,000,000	19.2	1.2	0.6
				10,000,000	48.0	2.0	1.9
9	5.0	30.5	0.0	300,000	1.8	0.0	0.2
				4,000,000	24.2	1.1	0.9
				10,000,000	60.5	2.0	1.4
10	15.0	30.5	0.0	400,000	1.2	0.0	0.1
				4,000,000	12.3	1.3	1.0
				11,000,000	44.8	2.0	1.4
11	5.0	45.7	0.0	300,000	1.4	0.0	0.1
				4,000,000	18.5	1.2	1.2
				8,000,000	37.1	2.0	1.4
12	15.0	45.7	0.0	700,000	1.4	0.0	0.2
				4,000,000	8.0	1.3	1.0
				7,000,000	14.0	2.1	1.5

^a Case numbers correspond to the case scenarios outlined in Table 3-5 of the ODCE.

^b Area coverage of solid waste estimated by SURFER™.

^c Area coverage of solid waste estimated using WASP output.

TABLE 2. SEAFOOD WASTE ACCUMULATION MODEL RESULTS
FOR MAXIMUM PARTICLE SIZE OF 0.95 CM (0.38 IN)

TABLE 2. SEAFOOD WASTE ACCUMULATION MODEL RESULTS FOR MAXIMUM PARTICLE SIZE OF 0.95 CM (0.38 IN)							
Case # ^a	Net-Drift Current Speed (cm/sec)	Water Depth (m)	Bottom Slope (%)	Waste Solids Discharge Rate (lb/yr wet weight)	Maximum Waste Accumulation Depth (cm)	Areal Coverage (acres)	
						S ^b	W ^c
Near-Bottom Shore-Based Discharges							
1	5.0	15.2	0.0	100,000	1.3	0.0	0.1
				16,000,000	215	1.1	0.8
				90,000,000	1,214	2.0	1.6
2	15.0	15.2	0.0	150,000	1.5	0.0	0.1
				6,000,000	60.1	1.0	0.3
				28,000,000	280.3	2.0	1.4
3	5.0	15.2	12.5	150,000	2.0	0.0	0.1
				16,000,000	216.6	1.0	0.8
				90,000,000	1,218	2.0	1.6
4	15.0	15.2	12.5	150,000	1.5	0.0	0.1
				6,000,000	60.1	1.0	0.3
				28,000,000	280.8	2.0	1.4
Near-Surface Floating Discharges in Open Ocean							
7	5.0	15.2	0.0	200,000	1.5	0.0	0.1
				4,000,000	30.4	1.0	0.8
				15,000,000	114.1	2.0	1.4
8	15.0	15.2	0.0	400,000	1.5	0.0	0.2
				3,000,000	11.4	1.1	0.6
				9,000,000	34.2	2.1	1.9
9	5.0	30.5	0.0	300,000	1.5	0.0	0.1
				3,000,000	15.0	1.0	0.7
				8,000,000	40.0	2.0	1.4
10	15.0	30.5	0.0	400,000	1.4	0.0	0.2
				3,000,000	10.5	1.1	0.6
				7,600,000	26.5	2.0	2.3
11	5.0	45.7	0.0	400,000	1.5	0.0	0.2
				3,000,000	11.2	1.0	0.9
				7,000,000	26.2	2.0	1.9
12	15.0	45.7	0.0	800,000	1.3	0.0	0.2
				3,500,000	5.6	1.1	1.0
				7,000,000	11.0	2.1	1.0

^a Case numbers correspond to the case scenarios outlined in Table 3-5 of the ODCE.

^b Area coverage of solid waste estimated by SURFER™.

^c Area coverage of solid waste estimated using WASP output.

TABLE 3. SEAFOOD WASTE ACCUMULATION MODEL RESULTS
FOR MAXIMUM PARTICLE SIZE OF 1.0 MM (0.04 IN)

Case # ^a	Net-Drift Current Speed (cm/sec)	Water Depth (m)	Bottom Slope (%)	Waste Solids Discharge Rate (lb/yr wet weight)	Maximum Waste Accumulation Depth (cm)	Areal Coverage (acres)	
						S ^b	W ^c
Near-Bottom Shore-Based Discharges							
1	5.0	15.2	0.0	500,000	1.1	0.0	0.1
				3,000,000	15.7	1.0	0.9
				8,000,000	41.7	2.0	1.4
2	15.0	15.2	0.0	600,000	1.5	0.0	0.2
				3,000,000	7.5	1.0	0.6
				7,000,000	17.6	2.1	1.5
3	5.0	15.2	12.5	300,000	1.6	0.0	0.1
				3,000,000	15.8	1.0	0.8
				8,000,000	42.1	2.0	1.4
4	15.0	15.2	12.5	600,000	1.5	0.0	0.2
				3,000,000	7.6	1.0	0.6
				7,000,000	17.7	2.1	1.3
Near-Surface Floating Discharges in Open Ocean							
7	5.0	15.2	0.0	1,000,000	1.1	0.0	0.2
				3,500,000	4.0	1.1	0.6
				6,000,000	6.8	2.0	2.1
8	15.0	15.2	0.0	3,000,000	1.3	0.0	0.5
				6,000,000	2.6	1.0	1.0
				8,500,000	3.7	2.0	1.9
9	5.0	30.5	0.0	2,000,000	1.2	0.0	0.2
				5,000,000	2.9	1.0	0.6
				8,000,000	4.7	2.2	2.1
10	15.0	30.5	0.0	3,000,000	1.1	0.0	0.3
				7,000,000	2.6	1.0	1.0
				10,000,000	3.7	2.0	1.5
11	5.0	45.7	0.0	3,000,000	1.2	0.0	0.2
				7,000,000	2.3	1.0	1.0
				10,000,000	3.9	2.1	1.9
12	15.0	45.7	0.0	9,000,000	1.3	0.0	0.9
				16,000,000	2.3	1.0	1.9
				20,000,000	2.9	2.0	1.9

^a Case numbers correspond to the case scenarios outlined in Table 3-5 of the ODCE.

^b Area coverage of solid waste estimated by SURFER™.

^c Area coverage of solid waste estimated using WASP output.